

where locally in the central portion it was the driest June of record. Deficiencies were large in portions of the Lake region also, and locally in near-by areas. In the far West precipitation was light as usual, though locally in southern Washington, northern Oregon, and near-by portions of Idaho there were some heavy falls.

## SNOWFALL

Traces of snow were reported at a few northern points and locally as far south as Kansas. In western Montana and northern Wyoming measurable amounts fell at a few exposed points. In the high Sierra of California there were local falls ranging up to 20 inches. Elsewhere in

the mountain districts the falls were usually no more than traces.

## RELATIVE HUMIDITY

Despite the general low temperatures, the percentages of relative humidity were distinctly less than normal in the Great Lakes region and to a less extent to the westward as far as the Dakotas, also over the Atlantic Coast States from Virginia to New England.

In other portions of the country the percentages were mainly above normal, and distinctly so in the Rocky Mountain region and over most of the Southeastern States except Florida, where the percentages were generally less than normal.

## SEVERE LOCAL STORMS, JUNE, 1927

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path, yards <sup>1</sup>	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Westville, Okla., and vicinity.	1	2 p. m.	4 mi.		\$360,000	Heavy hail.	Damage chiefly to crops; property damage considerable.	Official, U. S. Weather Bureau.
White City, Kans.	1	2:45-3 p. m.	3,520			do.	Wheat flattened; roofs pierced; poultry and small animals killed; path 16 miles long.	Do.
Ashland County, Wis.	1	4 p. m.				do.	Considerable minor damage reported.	Do.
Payne County, Okla. (south central).	1	4:30 and 6 p. m.	3 mi.		28,000	Two hailstorms.	Crop losses heavy; minor property damage; path about 8 miles.	Do.
Stroud, Okla., and vicinity.	1	5 p. m.	1,760		200,000	Wind, hail, and rain.	A number of houses demolished, many damaged; heavy losses in oil fields; plate-glass windows broken; trees torn; 3 persons injured.	Do.
Avery and Kendrick, Okla. (vicinity of).	1	5-5:30 p. m.	10 mi.			Heavy hail.	Severe crop injury; other minor damage.	Times Record (Fort Smith, Ark.).
Between Knox City and Munday, Tex.	1	5-8 p. m.	6 mi.		220,000	do.	Thousands of acres of crops ruined, necessitating replanting; buildings damaged.	Official, U. S. Weather Bureau.
Limon, Colo.	1	6 p. m.	15 mi.		350,000	do.	All damage reported was to crops.	Do.
Tillman County, Okla. (western).	1	7-8 p. m.	4 mi.		122,000	do.	Extensive crop damage over path 10 miles long.	Do.
Grady County, Okla. (northern).	1	8 p. m.	3 mi.		84,500	do.	Severe crop loss; minor damage to property; path 15 miles long.	Do.
Norman, Okla., and vicinity.	1	9 p. m.	5 mi.		20,000	do.	Damage principally to crops over path 10 miles long.	Do.
Ketchings Mills and Monetta, S. C.	1	P. m.			1,000	Hail.	Crops injured.	Do.
Hamilton, Kearny, and Finney Counties, Kans.	2	12:30 a. m.	3 mi.		60,000	Heavy hail.	Wheat and barley damaged over path 60 miles long.	Do.
Barton, Pawnee, and Stafford Counties, Kans.	2	1-3 a. m.	30 mi.		2,000,000	do.	Thousands of acres of wheat destroyed; minor damage to buildings.	Do.
Ross County, Ohio (eastern).	2	1-3 a. m.			15,000	do.	Storm very destructive to crops and gardens.	Do.
Dodge City, Kans.	2	1:40 a. m.	400		200,000	Violent wind.	25 buildings unroofed, 50 others damaged.	Do.
Ford County, Kans.	2	2 a. m.	7 mi.			Heavy hail.	Chief damage to wheat.	Do.
Miles to Venita, Okla.	2	7 a. m.	4 mi.		100,000	do.	Heavy crop and property damage over path 14 miles long.	Do.
Tecumseh, Okla. (near).	2	2 p. m.				do.	Character of damage not reported.	Do.
Denver, Colo.	2	5:26 p. m.	5-7 mi.		500,000	do.	Severe damage to greenhouses, skylights, and truck gardens; 4 persons injured.	Do.
Branchville, S. C. (near).	2	5:30 p. m.		2		Thunderstorm.	4 persons injured.	Do.
Cheyenne County, Kans.	2	7 p. m.	3,520			Heavy hail.	Wheat badly damaged.	Do.
Rockport, Ind., and vicinity.	2	8-9 p. m.				Wind.	Heavy crop loss; some damage to windows, roofs, and trees.	Evansville Journal (Ind.).
Dundy County, Nebr.	2	9:30 p. m.	3 mi.			Heavy hail.	Considerable damage to crops, gardens, and roofs.	Official, U. S. Weather Bureau.
Washita County, Okla. (southern).	2	9-10 p. m.	3 mi.		100,000	do.	Severe damage to crops; poultry, rabbits and small livestock killed.	Do.
Holt County, Nebr. (eastern).	2	11 p. m.	3,520			do.	Rye, alfalfa, and gardens injured over path 50 miles long.	Do.
Canadian County, Okla. (southeastern).	2		3 mi.			do.	Crops a total loss in center of storm; other minor property damage.	Do.
Gotebo, Okla. (north of).	2	P. m.	1/4-10 mi.			do.	Severe damage, estimate not obtainable.	Do.
Seminole, Okla. (near).	2				5,000	do.	Some damage in oil fields.	Do.
Cheyenne, Rawlins and Decatur Counties, Kans.	2-3	10:30 p. m. 1 a. m.	4-20 mi.		500,000	do.	Damage chiefly to wheat and barley over path 100 miles long.	Do.
Rooks and Osborne Counties, Kans.	3	4-5 a. m.	1-10 mi.		200,000	do.	About 57 square miles devastated.	Do.
Boone and Callaway Counties, Mo.	3	5-6 a. m.		2		Thunderstorm and wind.	Damage confined to trees, outhouses, telephone and telegraph wires.	Do.
Cloud County, Kans.	3	5-6 a. m.	3 mi.		240,000	do.	Extensive crop damage over large area.	Do.
Hannibal, Mo., and vicinity.	3	1:23 p. m.			100,000	Wind and hail.	Numerous buildings damaged; overhead wire systems impaired.	Do.
Saline County, Kans.	3	3:30-4 p. m.	3-4 mi.		50,000	Heavy hail.	Wheat damaged over path 30 miles long.	Do.
Atchison and Doniphan Counties, Kans.	3	4:30 p. m.	3 mi.		25,000	do.	Growing crops damaged.	Do.
Herington, Kans.	3	4:30 p. m.	3 mi.		110,000	do.	10,000 acres of wheat ruined; heavy damage to buildings.	Do.
Topeka, Kans. (near).	3	4:40 p. m.	33		400	Small tornado.	Damage confined to small buildings and trees over a path 5 1/2 miles long.	Do.
Perrytown, Tex. (near).	3	6 p. m.				Heavy hail.	Storm reported very destructive to crops and buildings.	Do.
Auburn, Kans.	3	6:30 p. m.	90		1,000	Double tornado.	2 parallel paths less than 2 miles long.	Do.
Fulton, La Salle, Macoupin, Marshall, Peoria, Pike, Sangamon, Schuyler, and Tazewell Counties, Ill.	3	P. m.				Wind, rain, and hail.	Extensive damage to crops, buildings, orchards; heavy damage to basements and railroad beds by flooding.	Do.

<sup>1</sup> "Mi." signifies miles instead of yards.

## Severe local storms, June, 1927—Continued

Place	Date	Time	Width of path, yards <sup>1</sup>	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Cushing, Okla. (4 miles west of)	3				350,000	Wind	Severe crop loss and property damage.	Official, U. S. Weather Bureau.
Paducah, Ky., and vicinity.	3				30,000	Wind and hail	Steel work of 6-story building wrecked; numerous barns and other buildings unroofed.	Do.
Wray, Colo.	3					Heavy hail	About 50 per cent of crops destroyed.	Do.
Huntington and Markle, Ind. (near)	4	1-2 a. m.			100,000	Tornadoic wind	Much damage to farm properties.	Do.
Grove and Lane Counties, Kans.	4	P. m.	5 mi.			Heavy hail	Fields in path left bare; trees stripped; livestock and poultry killed; hail in drifts 8 to 15 feet deep.	Do.
Perru, Ind.	4				8,000	Wind	Buildings damaged.	Do.
Shields, Kans.	4	P. m.	880		50,000	Tornado and hail	Damage by hail severe; minor wind damage.	Do.
San Jon, N. Mex.	5	5 p. m.	3-5 mi.		10,000	Hail	Poultry killed; homes and farm buildings considerably damaged.	Do.
Grover, Colo. (near)	5		3 mi.		10,000	do	Character of damage not reported.	Do.
Mobile, Ala. (9 miles north of)	5				1,500	do	Melons and vegetables injured.	Do.
Wellborn, Fla.	6	2.30 p. m.	3-6 mi.		11,000	do	Damage principally to crops.	Do.
Ville Platte, La. (2 miles south of)	6	4.45 p. m.				Wind and hail	Small church blown down; corn and cotton injured.	Do.
Gainesville, Fla.	6	5.30 p. m.	3 mi.		5,000	Heavy hail	Melons and corn damaged.	Do.
Kilgore, Nebr. (near)	7	Noon	2-5 mi.			do	Crops considerably damaged over path 7 miles long.	Do.
Lake City, Fla., and vicinity.	7	3-4 p. m.	12 mi.			Wind and hail	Young crops beaten; corn and tobacco damaged.	Do.
Portland, Oreg.	7	6 p. m.				Wind and rain	Damage chiefly by excessive rains flooding basements, sewers and homes; traffic menaced by washing of roads.	Official, U. S. Weather Bureau.
Scott County, Iowa.	7	7 p. m.			30,000	Hail	Crops damaged.	The Oregonian (Portland, Oreg.).
Fresno, Calif.	7					Thundersquall	Plate-glass windows broken; shade trees blown down; much fruit knocked off.	Official, U. S. Weather Bureau.
Boone, Floyd, Franklin, Greene, Hancock, Hardin, Jasper, Marshall, and Story Counties, Iowa.	8	4-7 p. m.			109,000	Hail, wind, and floods.	Severe crop injury; much damage to buildings and roads.	Do.
Polk, Sawyer, and Washburn Counties, Wis.	9	8-9 p. m.			78,000	Severe squall; probably tornado.	Silos, small farm buildings and timber damaged; 3 persons injured.	Do.
Houghton, Mich., and vicinity.	9					Electrical	Light and telephone lines damaged; tracks undetermined; farm house burned.	Do.
Murray City, Ohio.	10	P. m.			100,000	Cloudburst	Property of all kinds destroyed.	Do.
Fort Stockton, Tex. (near)	11	4-5 p. m.	3 mi.		22,500	Hail	Crops badly hurt; roofs and windows pierced.	Do.
Muscatiah, Kans.	11	7.45 p. m.	880		1,000	Small tornado	Trees and outbuildings damaged.	Do.
Nashville, Tenn.	11				50,000	Electrical	Warehouse and contents destroyed.	Do.
Chattanooga, Tenn., and vicinity.	12	A. m.				Thunderstorm	About 500 telephones out of use; many trees and poles leveled.	Do.
Wray, Colo.	12					Heavy hail	About half of crops destroyed.	Do.
Cedar Edge, Colo.	14	2 p. m.			10,000	do	Damage entirely to crops over narrow path.	Do.
Chester, S. C.	14	P. m.			1,500	Thunderstorm and wind.	Some buildings damaged.	Do.
Whitman County, Wash.	16					Hail	Growing crops considerably injured.	Do.
Rapid City, S. Dak.	17	12-3 p. m.				Hail, wind and rain.	Windows in buildings and greenhouses broken; roofs and auto tops pierced; air mail ship badly wrecked; gardens in city ruined.	Do.
Memphis, Tenn. (near)	17	6-7 p. m.	140			Probably tornado.	One barn demolished; trees and telephone lines damaged; truck gardens injured.	Do.
Allamore, Nebr.	18	4 p. m.	3 mi.		50,000	Hail	Much injury to crops; roofs damaged; path 7 miles long.	Press Scimitar (Memphis, Tenn.).
Labette and Neosho Counties, Kans.	19	Midnight-4 a. m.	do		50,000	Violent wind	Small buildings, trees, telephone and telegraph lines damaged.	Official, U. S. Weather Bureau.
Joplin, Mo.	19	A. m.			10,000	Wind and rain	Two homes wrecked and many buildings damaged; poles and trees blown down.	Do.
Wright County, Kans.	19	6-8 p. m.	5 mi.			Heavy hail	Damage chiefly to wheat, loss ranged up to 100 per cent.	Do.
Norfolk, Nebr.	20	3:30 p. m.	3		100	Tornado	Greenhouse damaged.	Do.
Buffalo and Dawson Counties, Nebr.	20	4-5 p. m.	4-9 mi.			Heavy hail	Vegetation destroyed at various points over path 70 miles long.	Do.
Rooks County, Kans.	20	6-6:30 p. m.	3 mi.		20,000	do	Approximately 20,000 acres of wheat damaged.	Do.
Seward County, Kans.	20	6:45 p. m.	5 mi.			do	Crops in path entirely destroyed; many buildings damaged.	Do.
Sidney, Ohio (north of)	21	8 p. m.				Wind	Considerable damage to trees, buildings and overhead wires.	Do.
Chattanooga, Tenn.	21					Thunderstorm	Some damage to construction work; telephone and telegraph service impaired.	Do.
Lubbock, Tex. (vicinity of)	22	7:30-8:30 a. m.	3 mi.			Heavy hail	Severe damage to cotton; feed stuff shredded; poultry killed.	Do.
Stanley, Wis. (near)	24	10 a. m.	3,520			do	Damage severe, character not reported.	Do.
Buffalo, N. Y.	25	6 p. m.				Thunderstorm	Damage by flooding and lightning; 6 persons injured.	Do.
Lockawanna and Wyoming Counties, Pa.	26					do	Several buildings partially destroyed; considerable damage by rain.	Do.
Aladdin, Wyo. (near)	27	3:30 p. m.	1,760		19,500	Wind and hail	Roofs, windows, crops and timber damaged or destroyed.	Do.
Adon, Wyo.	27	5:45 p. m.			17,500	Small tornado	Several buildings wrecked; 4 persons injured.	Do.
Allamore, Nebr.	28	4 p. m.	3 mi.		250,000	Heavy hail	Wheat beaten over large area; light globes broken; windows shattered; roofs punctured.	Do.
Crown Point, N. Mex.	28	4-5 p. m.	4 mi.			Wind and hail	Roof damaged; several small buildings razed.	Do.
Edna, Tex.	28		3,520		6,000	do	Crops damaged about 10 per cent; trees and windows broken; 6 oil derricks wrecked.	Do.
Valentine, Nebr.	29					Two thunderstorms.	Loose objects blown around; awnings and trees torn; other minor property damage.	Do.
Oberlin, Kans.	30	3:30 p. m.	5 mi.			Violent wind	Barns and shade trees wrecked.	Do.